DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012408
Date Inspected: 02-Mar-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG and Tower

Summary of Items Observed:
CWI Inspector: Mr. Du Zhi Qun

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bays 1 through 9

This QA Inspector observed no ZPMC personnel were working on Caltrans OBG segments or tower assemblies in OBG Bays 1 through 9.

Tower Bay 10

This QA Inspector observed ZPMC welder Ms. Hua Gui Mei, stencil 050295 is using submerged arc welding procedure specification WPS-B-T-3221-B-U3C-S-1 to make groove weld NSD1-TL5-3B-F-19A between North tower plate NNSD1-TL5-3A/F-LD5-6 and South tower plate SSD1-TL5-1A/F-LD5-5. This QA Inspector observed ZPMC Quality Control CWI Mr. Du Zhiqun monitoring this welding and this QA Inspector measured a welding current of approximately 605 amps and 30 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements. ZPMC welder Ms. Ye Xulan appears to be certified to make this

weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Ye Xulan, stencil 040581 is using shielded metal arc welding procedure WPS-B-P-2113-Padeye to weld a pad eye onto the exterior surface of North tower lift 4 skin plate D. This QA Inspector observed ZPMC personnel had used a torch to preheat the base material prior to welding and QC personnel are monitoring the skin plate preheat temperatures. This QA Inspector observed a welding current of approximately 145 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. ZPMC welder Ms. Ye Xulan appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents

This QA Inspector observed ZPMC welder Mr. Shi Xingyu, stencil 052930 is using shielded metal arc process procedure WPS-345-SMAW-3G(3F)-Repair to add weld material to extend the length of East tower shear plate ED1-27A in accordance with weld repair document TWR3074. This QA Inspector observed a welding current of approximately 155 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. This QA Inspector observed ZPMC has previously used electrical heaters to heat the base material prior to welding and ZPMC QC personnel are monitoring the interpass temperature to ensure the base material does not become overheated. ZPMC welder Mr. Shi Xingyu appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Shen Yun Chun, stencil 500363 is using shielded metal arc process procedure WPS-345-SMAW-3G(3F)-Repair to add weld material to extend the length of East tower shear plate ED1-27A in accordance with weld repair document TWR3074. This QA Inspector observed a welding current of approximately 160 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. This QA Inspector observed ZPMC has previously used electrical heaters to heat the base material prior to welding and ZPMC QC personnel are monitoring the interpass temperature to ensure the base material does not become overheated. ZPMC welder Mr. Shen Yun Chun appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Jiao Teng, stencil 053049 is using shielded metal arc process to make North tower lift 4 ladder attachment plate to skin plate stiffener, and the weld is identified as NSD1-FCSA4-1A/C-10. This QA Inspector observed a welding current of approximately 155 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. This QA Inspector observed QC personnel monitoring the base material interpass temperature. Items observed on this date appeared to generally comply with applicable contract documents.

Tower Bay 11

This QA Inspector observed no ZPMC personnel were working on Caltrans OBG segments or tower assemblies in Tower Bay 11 and most of the overhead lights were turned off.

OBG Trial Assembly

WELDING INSPECTION REPORT

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This QA Inspector observed no ZPMC personnel were welding on Caltrans OBG segments in the trial assembly area.

This QA Inspector observed two ABF personnel performing magnetic particle inspections of inspections of temporary alignment weld removal areas on either side of splice weld between OBG segment 6BE and segment 6CE, near panel point 43.

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer